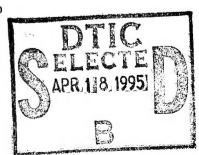
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NAVAL WAR COLLEGE NEWPORT, RHODE ISLAND

SUBMARINES - WHO NEEDS 'EM? JOINT MARITIME OPERATIONS

A paper submitted to the faculty of the Naval War College in partial satisfaction of the requirements for the Joint Maritime Operations Department.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature: <u>Diane C. Melcara</u>
Diane C. Mielcara

13 February 1995

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#### ABSTRACT

The current military/political climate of budget cuts, downsizing, the demise of the Soviet Union, and the establishment of a new world order has forced all services to reexamine and justify their existence.

I will specifically examine what the U.S. submarine has to offer to the defense of America in relation to the National Military Strategy, to include deterrence, forward presence, crisis response and reconstitution; enduring characteristics which include stealth, endurance and agility; critical roles such as peacetime engagement, surveillance, deterrence, regional sea denial, precision strike, task group support, ground warfare support and battlespace dominance; and contributions that the submarine can make to the post-Cold War era.

While there is no possible way to predict where or when the next conflict will occur, the submarine possess valuable attributes which can be successfully utilized at the operational level to enhance the mission and achieve success.

#### I. INTRODUCTION

"Now that the Cold War is over..." and "...the new world order..." are all too familiar phrases that have dominated nearly every conversation since the fall of the Soviet Union, particularly within the military community. Add to that downsizing and continued budget cuts and suddenly, all of the services are reexaming their assigned roles and/or developing doctrine in an attempt to justify their existence. One area currently under close scrutiny is the U.S. submarine. Funding for a third Seawolf is being hotly debated on Capital Hill, as well as the need for a more technologically advanced submarine.

Has the demise of the Soviet Union paved the way for a similar fate for the U.S. submarine? This author submits that the U.S. submarine will continue to play a vital role in maintaining America's defense posture and will examine this continued need in relation to: (1) the National Military Strategy; (2) enduring characteristics; (3) critical roles; and (4) contributions to the post-Cold War environment.

### II. NATIONAL MILITARY STRATEGY

The dissolution of the Soviet Union has removed the stability that was once a part of the bipolar world. The superpowers and their allies tended to follow a single set of rules when dealing with the other side. In a multipolar world, these rules are no longer in effect. Therefore, a larger number of regional conflicts are likely to occur.

While most, if not all, of these regional problems pose

little direct military threat to the United States, they can threaten our access to natural resources and global markets. In addition, regional conflicts could involve allied nations with whom we have established commitment. There is the constant threat of terrorism and drug trafficking which has directly affected the United States more, perhaps, than the Soviet military ever did during the Cold War.<sup>2</sup>

It is not possible to accurately predict the geopolitical or military context in which the submarine will be called upon to perform its roles in shaping future world events. Given the unpredictability of future scenarios for conflict and the uncertainty that conflict will occur, what context should be used to define the roles and missions of the submarine in future conflicts?

The President has defined four elements for the defense agenda:

Deterrence - Deterrence forms the central concept guiding U.S. military strategy. As long as substantial nuclear strike capability against the U.S. exists, deterrence of nuclear attack will be the highest defense priority. Deterrence also encompasses inhibiting conflicts that involve conventional weapons. Conventional deterrence relies upon our capabilities to sustain credible forward presence in important regions and to defeat or reverse an adversary's attacks.

Forward Presence - The goal of forward presence is to maintain a positive influence in distant regions. The military

contribution to this influence is the demonstration of U.S. engagement in those regions. U.S. forces deployed throughout the world promote American influence and access, show our commitment, lend credibility to our alliances, enhance regional stability, and provide a capability to respond to crisis.

Crisis Response - Regional conflicts fueled by ethnic, cultural, or economic differences, or control of resources may increase in numbers and intensity. In any event, regional crisis will occur. The range and scope of such contingencies can be many and varied. However, when U.S. interests are threatened, the goal will be constant - where possible prevent conflict, and, where not possible to prevent it, resolve the conflict in consonance with U.S. national security objectives. American forces must be able to respond rapidly to deter and, if necessary, to fight unilaterally or as part of a combined effort with other nations.

Reconstitution - Reconstitution is the generation of forces to meet contingencies that require forces beyond those available from active and reserve components. Implicit in the concept of reconstitution are the assumptions that any military threat beyond a regional crisis will also have to be built or reconstituted, and that there will be sufficient warning of the developing threat that our own forces can be built or reconstituted in adequate time to counter that threat.

This defense agenda is basic and is likely to endure beyond the 1990s. To meet the demand, the U.S. requires well-balanced

naval forces with capabilities ranging from sea-based strategic nuclear forces for deterrence to forward-deployed forces capable of responding quickly and operating anywhere.

### III. ENDURING CHARACTERISTICS

The submarine has demonstrated several characteristics that provide critical advantages and are unlikely to change with time:

stealth - This most basic and important characteristic derives from the fundamental ability of the submarine to submerge and become invisible and virtually undetectable. With nuclear propulsion, submarine stealth exists 24 hours a day. Submarine stealth should not decline since all past efforts to overcome it have been unsuccessful. The advantages that stealth provides the submarine include: Covertness, surprise, survivability, freedom of movement, self-defense, and uncertainty.

Endurance - Nuclear submarines have virtually unlimited submerged endurance conditioned only by onboard food supplies or weapons expenditure. Submarines do not require forward bases, extended logistic trains, or prepositioned supplies. Endurance provides the submarine with the advantages of continuity and independence.

agility - The submarine can proceed quickly where needed, often in advance of other forces, and can act promptly in response to a broad range of situations. Agility is much more than mobility. Agility of the submarine results from: (1) nuclear propulsion, which provides high speed for an unlimited time; (2) multiple mission capability provided by the ship

design, weapons, sensors, and crew training; (3) a proven readiness posture; and (4) reliable shore or tender based submarine command, control, and communications systems. Agility provides advantages of mobility, flexibility, readiness, and responsiveness.<sup>4</sup>

With their inherent advantages of stealth, agility, and mobility, submarines are uniquely suited tools for the risk manager to apply in minimizing the likelihood of those "war breaker" events that have the potential to force the United States out of action. War breakers - including the loss of capital ships, the loss of many aircraft, or even the capture and exploitation of soldiers, sailors, or fliers - can, by their very nature, cripple an operation, even those operations where it is clear that, if both parties persevere, the United States will come out on top. 5

# IV. CRITICAL ROLES

In the defense agenda of the new world order, the enduring characteristics and the advantages they provide result in the following critical roles for the submarine:

Peacetime Engagement - The submarine will support the defense agenda of Forward Presence through a spectrum of activities such as deployments, combined exercises and operations, port visits, and military-to-military relations. Although this is not a new role for the submarine, greater visibility will enhance the image of global presence and commitment, despite declining force levels. The presence of a

capital asset also complements the more limited navies and military forces of many friends and allies. The presence of a submarine will demonstrate U.S. engagement, thus promoting regional stability and cooperation.

<u>surveillance</u> - The submarine is an exceptional maritime surveillance platform. The covert submarine can transmit realtime information to the National Command Authorities in time to avert or mitigate crisis, and to task force commanders in time to thwart an attack. The submarine can also collect intelligence of long-term value because the adversary cannot tell when or if the submarine is present. The value of information obtained before, during, and after conflict and crisis is increasing. The Surveillance role can be executed across the spectrum of levels of violence.<sup>6</sup>

The British effectively utilized their SSNs in this role during the Falkland's conflict in coastal surveillance and tactical indications and warnings (I&W) against Argentinean aircraft raids.

<u>Deterrence</u> - The submarine will play a critical role in deterrence of both nuclear and conventional conflict. The peacetime role of the ballistic missile submarine will continue to be nuclear deterrence. Stealth makes this component the most survivable element of the nuclear deterrent triad. The attack submarine will continue its important role in conventional deterrence while simultaneously maintaining its contribution toward nuclear deterrence. As a conventional deterrent, the

attack submarine is a ubiquitous threat that can exert sustained pressure on nearly any trouble spot. It can do so with minimal provocation, risk of casualties, or events that might adversely affect the American national will.

Regional Sea Denial - In areas where unacceptably high risks to friendly surface and air forces exist, the submarine can interdict threat surface and submarine forces, as well as merchant shipping, thereby denying access to the region. To conduct all naval operations (except submarine operations) local sea superiority must be established. Sea denial is a prerequisite to sea superiority and, in congested areas, is most readily established by submarines because of their enduring characteristics. In the Regional Sea Denial role, the submarine may operate independently or in coordination with other forces. This role also allows the submarine to exercise its preeminent capability for antisurface and antisubmarine warfare to help clear the battle space in a regional conflict. This role may also entail the conduct of covert offensive mining operations by submarines or enforce blockades or other sanctions.

Precision Strike - This is a relatively new role for the submarine. Submarines can strike targets ashore within 650 miles of the coast using cruise missiles. This encompasses about 75% of the earth's landmass and includes most of the potentially important targets. The submarine can be positioned without prealertment or provocation of the adversary, and its stealth allows the submarine to exploit surprise. The transition from

covert posture to military attack can be done instantaneously from the adversary's perspective without any external indications. Precision weapons allow the submarine to strike the designated target while minimizing any collateral damage, without risk to the launching platform. As the vanguard element of a coordinated strike, submarine-launched cruise missiles can attack air defense, early warning. and communications facilities to reduce the threat against follow-on aircraft.

Task Group Support - The submarine can operate in the Task Group Support role either as an integrated component or independently. The stealth of the submarine allows it to be the unseen eyes and ears of the task group. Submarines can operate with relative impunity in waters controlled by hostile forces, allowing U.S. surface ships to stay out of range of hostile fire. Endurance allows the submarine to arrive on the scene before the task group, remain on station throughout the crisis, and depart well after the task group departs, if necessary. The agility of the submarine allows it to perform a wide variety of missions as required by the task group commander and enables the task group to conduct its operations more effectively while minimizing the risk of being attacked.

Ground Warfare Support - The ability of the submarine to operate covertly, close to enemy coastlines, allows it to support ground warfare operations in ways that other platforms cannot. A key mission of submarines in this supporting role will be to insert small groups of forces for which surprise or secrecy is

essential. Other Ground Warfare Support missions include collection of tactical intelligence for forces ashore by reconnoitering coastal areas in advance of amphibious operations.8

<u>Battlespace Dominance</u> - Although somewhat of a new concept in the naval arena, simply speaking, the battlespace is the sea, air, and land environments where operations will be conducted. The dominated battlespace expands and contracts and has limits. Dominating the battlespace presupposes effective command and control capabilities and serves as the logical prerequisite for the projection of power ashore. Battlespace dominance means that we can maintain access from the sea to permit effective entry of equipment and resupply.

Detection, localization and destruction are real issues to be dealt with within the battlespace environment. Foreign programs are in high gear. Thirty-nine nations operate more than 400 diesel-electric submarines. North Korea operates 24 diesel-electric subs plus 48 "midget subs". In the Mediterranean and Persian Gulf area Algeria, Libya, Syria and Iran all possess diesel-electric capability. There are at least 50 subs in the "Med" alone. 10

Future submarine roles will be significant elements in establishing and maintaining a stable world order. These roles will complement those of other military forces in achieving national objectives, yet the inherent combination of stealth, endurance, and agility allows the submarine to perform missions

that no other force can accomplish and its versatility allows it to accomplish more than one role simultaneously, if tasked. 11

## V. CONTRIBUTIONS TO THE POST-COLD WAR ENVIRONMENT

It would be highly irresponsible to ignore the complexity of the new world situation - which, in some ways, is actually more dangerous than it was before. Those who plan for future regional conflicts should recognize the historical role of the submarine as a force multiplier.

Emphasis has shifted to involvement in Low Intensity Conflict (LIC), Contingency and Limited Objective Warfare which will, more than likely, expand the role of the submarine. Additional roles may include the following areas:

- Special forces have unique capabilities that are fully exploitable in the LIC arena. Small numbers of special purpose troops inserted into enemy territory from the sea are capable of performing a host of functions including surveillance, intelligence missions, reconnaissance, targeting support (including naval gunfire support, forward air controller and laser designation for surgical smart munitions delivery), attacks on shore and port facilities, attacks on ships in port, and battle damage assessment (BDA). Submarines have an extremely covert capability to insert and extract special warfare forces. Their stealth capability is often essential either to avoid mission compromise or to allow plausible denial. The use of submarines in this mission area is not new. In both the Korean war and the Vietnam Conflict, special force and intelligence

gathering was conducted. And, the submarine was used in Grenada operations where special forces were inserted before the main assault.

- In a hostile environment, especially in the coastal areas, the submarine is well-suited for Combat Search and Rescue (CSAR) and Non-Combatant Evacuation Operations (NEO). They are able to penetrate a hostile area with greater ease than a more vulnerable surface asset, retrieve downed aviators, and then withdraw covertly. During a NEO, the submarine may be the ideal platform as an avenue of egress for special force units.
- Conducting offensive mining and mine self-defense.

  The use of mines is an essential element for sea control/denial.

  Mining is an extremely effective and inexpensive method of sea denial. Therefore, it is a method most likely to be utilized in a Third World scenario because of its cost benefit. The use of mines can be very convincing against an amphibious assault, an unopposed landing, or it can enhance ASW operations by funneling SSN movements. The submarine can provide special force and mine counter measure delivery to hostile protected waters in order to clear a path for amphibious operations or expanded surface and submarine patrol areas
- Anti-surface strike warfare (ASUW) and Anti-Submarine Warfare (ASW) are missions the SSN traditionally held during the Cold War period. With the global changes taking place, these roles will still be in the forefront but with a more laterally expanded concentration. The former Soviet threat has not receded

altogether. The Third World submarine threat is real and will take a much greater segment of the ASW problem. Submarine hardware and technological proliferation are a growing concern to U.S. national interests. The submarine is still by far the best ASW platform available and therefore the continuance of the primacy of the ASW mission. If In ASW, no help will come from other military services; whatever capability exists will reside in the Navy. As the United States begins to reshape its forces for peacetime presence, maintenance of an effective ASW capability is manifestly the most important task of the naval profession. Is

- Submarines have conducted more than 200 port visits to more than 50 cities around the world, and operated with the Naval forces of a number of nations. Recently, the USS Miami (SSN 755), while on routine patrol, was notified of an emerging task in the North Atlantic and was transferred to the operational control of the British Navy. They did a significant amount of work with British submarines, British maritime patrol aircraft, and British surface vessels, plus a number of other U.S. submarines. It was a major, nationally significant operation that lasted for about two weeks. They were then ordered to the "Med" where they became an asset for Task Force Sixty-Nine. Subsequently, they went to the Adriatic for an intelligence-gathering and surveillance mission in support of NATO efforts and coordinated extensively with Western European Union ships in enforcing the embargo against the former Yugoslavia. 17

- Thirty-eight submarines conducted carrier support actions in 1992 and almost all attack subs are escorting carrier battle groups. Instead of sneaking under the polar ice cap in a perpetual game of cat and mouse, submariners are more likely to be operating as an integral part of the carrier battle group. In the carrier battle group.
- Submarines may soon be working in tandem with the Air Force, helping to direct air traffic from the safety of the deep sea. And they are protecting carriers and amphibious ships from potential sneak attacks launched by unfriendly small craft and low technology submarines and mines.<sup>20</sup>
- A submarine may be detailed to support the Drug Enforcement Agency (DEA) in what's called a "spotting for takedown." In this role, a sub shadows a vessel suspected of carrying drugs from its harbor of origin to its destination, monitoring every communication to and from the vessel. As necessary, appropriate information is funneled to law enforcement officials.<sup>21</sup>

#### VI. CONCLUSIONS

In this ever-changing environment, where regional conflicts and operations other than war (OOTW) are becoming the rule - not the exception, it is difficult to pinpoint where and when the submarine (or any other U.S. force for that matter) will be needed in support of the national defense.

Although the Soviet Union no longer exists as a single political (or military) entity, that does not mean that the modern and increasingly capable submarine force built by the

former superpower will disappear. North Korea, arguably the most potentially dangerous nation in the post-Cold War era, possesses the fifth largest submarine fleet in the world. The former Soviets had been producing four classes of diesel-electric "Third World" submarines, and many of those submarines have been exported to the Third World. Moreover, China has produced, and India has acquired, large submarine forces that are relatively well-maintained and that routinely operate at sea.<sup>22</sup>

World-wide trends point toward continued regional instability driven by the pressure of economic hardship, mass migrations, and ideological differences. There will be many more situations such as we have today in Bosnia, Somalia, Rwanda, and Haiti; there is a danger of major regional conflicts in the Persian Gulf and the Korean peninsula; and a resurgent Russia could emerge at odds with the West if Democratic reforms fail.<sup>23</sup>

Chapters II, II, and IV have attempted to stress the significant characteristics and contributions the submarine can make in dealing effectively with an unstable world and to protect our vital interests. Possession of these capabilities makes the submarine a valuable and vital asset in the vast majority of missions that U.S. forces could be assigned in the current world climate.

Unfortunately,, to the detriment of the submarine force, much of what they have accomplished in the past, out of necessity, has been cloaked in secrecy. However, the submarine force has not been immune to budget cuts and downsizing. Therefore, in an

begun to open up its world to outsiders. As stated by CDR Keith Jones, Commanding Officer of the USS Miami, "I'd venture that if the records were made public we'd see that in a great majority of national or international crisis that required a U.S. forward presence, either a submarine was already nearby or was the first U.S. asset on the scene. We're fast; we're forward-projected; we carry a potent mix of weapons that can strike land and sea targets; and we can stay on station months at a time. We're always at the doorway to let our bosses know what's going on."

No, submarines are not always going to be the platform of choice. However, by pointing out the enduring characteristics they possess and the critical roles in which they can be employed, it is obvious that the submarine has been, is, and will continue to be a major contributor to America's defense. Who needs submarines - WE DO!

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